

USSR

FEDOROVA, Yu. N., and KARCHIK, O. N., *Khimiya v Sel'skom Khozyaystve*,
Vol 9, No 7, 1971, pp 45-47

sevin in water (0.01%), the insecticide was resorbed rapidly by the roots and accumulated in the plants in amounts which bore no relation to its concentration in the aqueous solution. This had also been observed for other carbamates. The rapid resorption of sevin and other insoluble substances by the roots of plants can be explained by solution of these substances in lipids present in the roots.

1/2 014 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--CHANGES IN ATPASE ACTIVITY IN ATHEROSCLEROTIC RABBITS -U-
AUTHOR--(05)-ASATIANI, V.S., KARCHKHADZE, R.G., SHAMKULASHVILI, G.G.,
DZHUGELI, I.S., SILAGADZE, L.S.
COUNTRY OF INFO--USSR
SOURCE--SOBESHCH. AKAD. NAUK GRUZ. SSR 1970, 57(2), 469-72
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ATHEROSCLEROSIS, RABBIT, MITOCHONDRION, ENZYME ACTIVITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/0212 STEP NO--UR/0251/70/057/002/0469/0472
CIRC ACCESSION NO--APC135708
UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--11DEC70
CIRC ACCESSION NO--AP0135708
ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. IN RABBITS THE HIGHEST ATPASE
ACTIVITY IS IN THE MITOCHONDRIA OF CARDIAC MUSCLE. ON COMPARING VARIOUS
IONS (K, NA, MG, CA), ONLY MG ACTS AS AN ACTIVATOR OF ATPASE IN HEART,
BRAIN, AND LIVER. IN ATHEROSCLEROTIC RABBITS, THE ATPASE ACTIVITY IS
LOWER IN MITOCHONDRIA BUT HIGHER IN THE SUPERNATANT FRACTION.
FACILITY: TBILIS. GDS. MED. INST., TBILISI, USSR.

UNCLASSIFIED

USSR

UDC: 535.345.1

SOSSI, L. and KARD, P.

"Propagation of Light in a Thin, Nonuniform Dielectric Layer"

Tallin, Izvestiya Akademii Nauk Estonskoy SSR, vol 21, No 2, 1972, pp 155-161

Abstract: This paper is based on an earlier article by the same authors in the same journal (17, 1968, p 41) in which formulas were obtained for the reflection and transmission coefficients of monochromatic light normally incident on a fine, nonuniform dielectric layer; the index of refraction of the film transforms continuously to the index of refraction of the original medium at the outside boundary of the film. The purpose of the present article is two-fold: first, to reconstruct the equations of the earlier article such that their terms will have a simple physical interpretation; second, to derive simpler formulas without obscuring these physical interpretations. Simple formulas for the coefficients of reflection and transmission of light in the film are also obtained. The authors are associated with the Tartu State University.

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UDC 542.91:547.1'118:541.69

KRESTKIN, A. P., VOLKOVA, R. I., GODOVIKOV, N. N., KABACHNIK, M. I.,
KARDANOV, N. A., Institute of Organoelemental Compounds of the Soviet
Academy of Sciences; Institute of Evolutionary Physiology and Biochemistry
imeni I. M. Sechenov of the Soviet Academy of Sciences

"Interaction of S-(β -Alkylmercaptoethyl)diphenylthiophosphinates,
O-(β -Alkylmercaptoethyl)diphenylphosphinates and Their Iodomethylates
With Butyrylcholinesterase"

Moscow, Izv. An SSSR: Ser. Khimicheskaya, No 3, Mar 73, pp 622-627

Abstract: The paper gives the results of research on the kinetics of
inhibition of butylcholinesterase by S- β -alkylmercaptoethyl diphenyl-
thiophosphinates, O- β -alkylmercaptoethyl diphenylphosphinates and their
methiodides. It is found that these substances have a combination type
of inhibiting action which increases with the length of the alkyl radical
bound to the sulfide or sulfonium sulfur atom.

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USSR

UDC 547.26'118'558.1

GODOVIKOV, N. N., KARDANOV, N. A., and KABACHNIK, M. I., Institute of Elementorganic Compounds, Academy of Sciences of the USSR

"Synthesis of O-(β -Alkylmercaptoethyl) Diphenylphosphinates, S-(β -Alkylmercaptoethyl) Diphenylthiophosphinates and Their Methiodides"

Leningrad, Zhurnal Obshchey Khimii, Vol 42(103), No 2, Feb 72, pp 273-276

Abstract: A number of O-(β -alkylmercaptoethyl) diphenylphosphinates, S-(β -alkylmercaptoethyl) diphenylthiophosphinates and the corresponding methiodides were synthesized. The O-(β -alkylmercaptoethyl) diphenylphosphinates were produced by interacting diphenylphosphinoyl chloride with β -hydroxyethyl alkyl sulfides in the presence of triethylamine. The S-(β -alkylmercaptoethyl) diphenylthiophosphinates were synthesized by first converting β -hydroxyethyl- alkyl sulfides to β -chloroethyl alkyl sulfides by treatment with thionyl chloride. The resultant β -chloroethyl alkyl sulfides were then reacted with potassium diphenylthiophosphinate to obtain the S-(β -alkylmercaptoethyl) diphenylthiophosphinates. The corresponding methiodides were synthesized by treating the resultant phosphinates with methyl iodide. The starting β -hydroxyethyl alkyl sulfides

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GODOVIKOV, N. N., et al., Zhurnal Obshchey Khimii, Vol 42(103), No 2, Feb 72, pp 273-276

For the reactions were synthesized by treating thiourea in order with alkyl bromides, an aqueous solution of potassium hydroxide, and ethylene chlorohydrin, without isolation of the intermediate products. The synthesized compounds are analogs of the physiologically active O-ethyl S-(β -alkyl-mercaptoethyl) methylphosphonates.

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USSR

UDC 547.26'118

KARDANOV, N. A., GODOVIKOV, N. N., and KABACHNIK, M. I., Institute of Element-Organic Compounds, Academy of Sciences USSR

"Synthesis of O- ω -Ethylmercaptoalkyl Diphenylphosphinates and Their Methiodides"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 2, Feb 71, pp 327-330

Abstract: In an attempt to prepare compounds with cholinolytic action a series of O- ω -ethylmercaptoalkyl diphenylphosphinate methiodides (I) was synthesized by the reaction of diphenylphosphinyl chloride with ω -hydroxy ethyl sulfides (II) in presence of triethylamine. The intermediate O- ω -ethylmercaptoalkyl diphenylphosphinates were then treated with methyl iodide to give (I). Several routes were used to get the starting (II): γ -hydroxypropyl-ethyl sulfide was synthesized by addition of ethyl mercaptan to allyl alcohol in presence of benzoyl peroxide; the delta-hydroxybutyl homolog was obtained by reaction of δ -chlorobutanol with sodium ethylmercaptide. To synthesize ϵ -hydroxypentyl- and hydroxyhexyl ethyl sulfides ω -bromoalkyl benzoate was allowed to react with potassium methyl-mercaptide, followed by saponification. No biological data are reported.

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UDC 542.48

DYABLO, V. V., ZASTAVNYUK V. K., KARDASEVICH, O. A., and KORNEICHEV, A. I.

"Calculation of Optimal Parameters of Thermal Distillation Equipment for Salt Water With Maximum Evaporation"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 6, 1971, pp 4-8

Abstract: The basic problem facing design of novel desalination equipment is the selection of optimal parameters assuring production of fresh water at minimal cost. A method is reported for determination of such optimal parameters for multiple stage desalination units with maximum evaporation in which the concentration of the solution is brought to about the crystallization point of various salts. To prevent accumulation of sediment on heating surfaces hydrophobic heat carrier is used. An apparatus consisting of the main heater, heat exchange chamber, evaporation chamber, condenser and a pump, and the principles of operation are described in detail. Formulas have been developed, which were solved using the ETSVM "Minsk-22" system. Optimal parameters for desalination equipment have been reported graphically.

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1/2 023 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--SOME PROBLEMS OF PATHOGENESIS OF JUVENILE CHLOROSIS -U-
AUTHOR--(02)-IDELSON, L.I., KARDASH, B.YE. K
COUNTRY OF INFO--USSR
SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 6, PP 22-29
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--IRON, DIETARY MINERAL DEFICIENCY, ANEMIA, PEDIATRICS,
HEMOGLOBIN, BLOOD SERUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/1916 STEP NO--UR/0504/70/042/006/0022/0029
CIRC ACCESSION NO--AP0129265
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--30DCT70

CIRC ACCESSION NO--AP0129265

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO FIND OUT THE ROLE OF CONGENITAL IRON DEFICIENCY IN THE DEVELOPMENT OF JUVENILE CHLOROSIS THE AUTHORS EXAMINED 40 MOTHERS WHO HAD HYPOFERROUS ANEMIA AND THEIR HEALTHY CHILDREN (54 PERSONS), AS WELL AS 47 CHILDREN WITH HYPOFERROUS ANEMIA AND THEIR HEALTHY MOTHERS (36 PERSONS). IT WAS ESTABLISHED THAT IN ONE FOURTH OF HEALTHY PERSONS THE HEMOGLOBIN CONTENT WAS DECREASED. IN ONE THIRD HEALTHY CHILDREN OF ANEMIC MOTHERS AND ONE FIFTH HEALTHY MOTHERS OF ANEMIC CHILDREN THE IRON CONTENT IN THE BLOOD SERUM APPEARED TO BE DECREASED. THE DIFFERENCE IN THE MEAN IRON CONTENT IN THE HEALTHY GROUPS WAS THE SAME OR SIGNIFICANTLY LOWER. IN NORMAL HEMOGLOBIN CONTENT AND THE IRON LEVEL IN THE SERUM A DROP IN IRON RESERVES WAS REVEALED IN SOME HEALTHY INDIVIDUALS BY MEANS OF A DESFERAL TEST. POSSIBILITIES OF DEVELOPMENT OF HYPOFERROUS ANEMIA AT THE AGE OF 13-15 YEARS IN GIRLS BORN WITH IRON DEFICIENCY ARE DISCUSSED. FACILITY: GRUPPA AKAD. AMN SSSR I. A. KASSIRSKOGO, MOSKVA.

UNCLASSIFIED

USSR

UDC 616.9-036.21]:681.3(476)

KARDASH, I. B., KLIMENKO, Ye. P., DROSDOVA-TIKHOMIROVA, A. A., POLIVODA, Z. M., RUBANOVA, F. G., LEPESHINSKAYA, I. V., RYTIK, P. G., and KNYSH, I. N., Ministry of Health Belorussian SSR, Central Institute of Epidemiology of the Ministry of Health USSR, Belorussian Institute of Epidemiology and Microbiology, and Belorussian Republic Sanitary Epidemiological Station

"Experience Gained in the Belorussian SSR During Introduction of a New Epidemiological Investigation Card Adapted for Processing on IBM Computer Minsk-22"

Moscow, Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 12, 1972, pp 124-128

Abstract: A new IBM card with a detachable statistical stub, developed for epidemiological investigations at the Central Institute of Epidemiology, was tested in 1968-1970 in a feasibility study conducted throughout the Belorussian Republic. The project was a success not only because the IBM card is useful and convenient but also because the personnel at district and municipal epidemiological stations had received through advance training in how to fill in the cards and code the stubs. A control staff routinely examined the cards and corrected errors detected in a total of 3.1% of the stubs. Procedural improvements were introduced throughout the 3 year period as dictated by expediency. After each quarter-year, the stubs were checked at the local

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KARDASH, I. B., et al., Zhurnal Mikrobiologii Epidemiologii i Immunobiologii, No 12, 1972, pp 124-128

stations and submitted to the municipal or oblast stations where they were recorded and checked again. Next, they were sent to the Belorussian Institute of Epidemiology and Microbiology for the third check, and from there to the Computer Center of Belorussia's Central Statistical Administration where the data were transferred on perforated tapes and processed on the computer. The method yielded statistical charts with more accurate and detailed information than was ever available in the past. The method was approved by the Ministry of Health USSR and, in 1970, it was introduced on a permanent basis in epidemiological stations throughout the Belorussian SSR.

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1/2 027 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--CONCERNING THE DIFFERENTIAL DIAGNOSIS OF PROGRESSIVE
LEUKOENCEPHALITIS AND GLIOMA OF THE BRAIN -U-
AUTHOR--(05)--LEONOVICH, A.L., SKLYUT, I.A., KARDASH, I.I., KASTRITSKAYA,
Z.M., KRASILNIKOVA, N.YA.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970,
VOL 70, NR 5, PP 673-679
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TUMOR, BRAIN, LESION, DIAGNOSTIC MEDICINE,
ELECTROENCEPHALOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/0232

STEP NO--UR/0246/70/070/005/0673/0679

CIRC ACCESSION NO--AP0117484

UNCLASSIFIED

2/2 027
CIRC ACCESSION NO--AP0117484

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS CONVENED A CLINICO LABORATORIAL ANALYSIS OF 44 CASE HISTORIES OF PATIENTS WITH PROGRESSIVE LEUKOENCEPHALITIS AND NEUROECTODERMAL BRAIN TUMORS. SPECIAL ATTENTION IS BEING GIVEN TO PSEUDOTUMOROUS SYMPTOMS IN DIFFERENT FORMS OF PROGRESSIVE LEUKOENCEPHALITIS (SCHILDERS, SCHOLZ, VAN BOGARTS DISEASE). FOR DIFFERENTIAL PURPOSES THE AUTHORS UTILIZED OTONEUROLOGICAL AND X RAY CONTRAST METHODS, AS WELL AS EEG DATA. THE EEG OF PATIENTS WITH PROGRESSIVE LEUKOENCEPHALITIS DISPLAYED AN OPEN INTRAHYDROCEPHALIA WITHOUT A DISPLACEMENT OF THE VENTRICULAR SYSTEM. THE EEG CHANGES WERE IN THE FORM OF A DIFFUSE DISORGANIZATION OF THE RHYTHMS WITH A LOW AMPLITUDE ACTIVITY OR HIGH VOLTAGE PAROXYSMS OF ACUTE AND SLOW WAVES. THE OTONEUROLOGICAL CLINICAL PICTURE IN PROGRESSIVE LEUKOENCEPHALITIS IN COMPARISON TO TUMORS WAS CHARACTERIZED BY MULTIPLE FOCI, SUB AND SUPRATENTORIAL SYMPTOMATOLOGY. THIS INDICATES NOT ONLY TO A LESION OF THE HEMISPHERES, BUT OF THE STEM STRUCTURES AS WELL. FACILITY: KAFEDRA NERVNYKH BOLEZNEY BELORUSSKOGO INSTITUTA SOVERSHESTVOVANIYA VRACHEY AND N-I INSTITUT NERVOLOGII, NEYROKHIRURGII I FIZIOTERAPII, MINSK.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--CHARGE TRANSFER COMPLEXES AND CHEMICAL REACTIONS BETWEEN PRIMARY
AROMATIC AMINES AND AROMATIC CARBOXYLIC ACID DERIVATIVES IN THE SOLID
AUTHOR--(04)--KARDASH, I.E., GLUKHOYEDOV, N.P., PRAVEDNIKOV, A.N., MEDVEDEV,
S.S.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(2), 391-4 (PHYS CHEM)
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--IR SPECTRUM, UV SPECTRUM, PRIMARY AROMATIC AMINE, AROMATIC
CARBOXYLIC ACID, LOW TEMPERATURE EFFECT, CHLORINATED ORGANIC COMPOUND,
PHTHALIC ANHYDRIDE, MALEIC ANHYDRIDE, COMPLEX COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/0699 STEP NO--UR/0020/70/191/002/0391/0394
CIRC ACCESSION NO--AT0124371
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0124371

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UV AND IR SPECTRA WERE REPORTED FOR SOXUBLIMED SYSTEMS OF: CHLORANIL, TEREPHTHALOYL CHLORIDE, ISOPHTHALOYL CHLORIDE, PHTHALIC ANHYDRIDE AND MALEIC ANHYDRIDE WITH PRIMARY AND TERTIARY AMINES: P,C SUB6 H SUB4, (NH SUB2) SUB2, BENZIDINE, P,DIAMINODURENE, M,C SUB6 H SUB4 (NH SUB2) SUB2 AND (P,ME SUB2 NC SUB6 H SUB4) SUB2 TAKEN IN PAIRS. SUCH COSUBLIMATION OF AROMATIC AMINES AND ACID ANHYDRIDES OR CHLORIDES ONTO A SURFACE COOLED WITH LIQ. N RESULTED IN COMPLEX FORMATION AND TRUE CHEM. REACTIONS AT SIMILAR TO 120DEGREESK, I.E. SOMEWHAT ABOVE THAT OF LIQ. N AT WHICH NO TRUE REACTIONS WERE OBSERVED. EVIDENTLY AT THE SLIGHTLY HIGHER TEMP. IT BECOMES POSSIBLE TO HAVE ROTATION OF INDIVIDUAL MOL. GROUPS OR SOME MOBILITY OF MOLECULES PER SE. THE CHARGE TRANSFER COMPLEX FORMATION WAS CHARACTERIZED BY BAND SHIFTS, WHICH WERE TABULATED. THE ELECTRONIC SPECTRA OF THE COSUBLIMATES AT 77DEGREESK REMAINED SUBSTANTIALLY UNCHANGED WITH TIME, BUT SLIGHT WARMING RESULTED IN THE DISAPPEARANCE OF ABSORPTION IN THE VISIBLE SPECTRUM AND DEVELOPMENT OF CHEM. REACTIONS WHICH COULD BE FOLLOWED BY IR SPECTRA, WHICH REVEALED AMIDE GROUP DEVELOPMENT.

FACILITY: FIZ. KHIM. INST. IM. KARPOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 551.521.3:551.463.5:535.36

ZEGE, E. P. and KARDASH, L. I.

"Light Field in the Depth Mode With Polarization Taken Into Account"

Minsk, Zhurnal Prikladnoy Spektroskopii, vol 17, No 5, 1972, pp 861-871

Abstract: The problem with which this paper is concerned is that of finding the light field in the depth of an optically thick or semi-infinite layer of an absorbing and scattering medium. The paper examines the depth mode in a medium with scattering centers of arbitrary dimensions and form. In this theoretical treatment it is assumed only that the medium is symmetrical and the particles are chaotically oriented and are uniformly distributed in the layer, an assumption that always holds true in real dispersing media such as seawater and clouds. The authors begin their analysis with the statement of a matrix which describes the linear transformation law of the Stokes vector in a single scattering. A plane, semi-infinite medium whose boundary is illuminated by an infinitely wide parallel light beam is considered; a stationary angular

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ZEGE, E. P., et al, Zhurnal Prikladnoy Spektroskopii, vol 17, No 5, 1972, pp 861-867

distribution of the Stokes vector components, known as the depth mode, is in the depth of the scattering medium at a sufficient distance from the boundary. The matrix for the angular scattering is determined, and a system of integral equations for the Stokes parameters in the depth mode is derived. The equations are numerically solved and the light field is investigated.

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USSR

UDC: 51

KARDASH, V. A., RAPOPORT, E. O.

"Concerning an Optimum Irrigation Policy Under Conditions of Runoff Regulation"

Sb. tr. In-t mat. Sib. otd AN SSSR (Collected Works. Institute of Mathematics of the Siberian Department, Academy of Sciences of the USSR), 1972, vyp. 7(24), pp 35-44 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V583 by the authors)

Translation: A model of many years of runoff regulation for irrigation purposes is considered. The model is based on an economic criterion of optimality -- maximum return on capital investments by pure income. The key design parameters of the system comprised of the irrigation complex and the irrigated land are selected with regard to the most important technical requirements for matching them. In this regard, operation of the system is treated as a random process related to the dynamics of river runoff. For a goal function of special form, simple formulas are derived which define the policy of accumulating and utilizing water each year. A method is proposed for finding optimum strategic parameters of irrigation (reservoir capacity and irrigation area).
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USSR

UDC: 51

KARDASH, V. A. and RAPOPORT, E. O.

"Optimal Irrigation Policy Under Conditions of Runoff Control"

Sb. tr. In-t Mat. Sib. otd. AN SSSR (Collection of Works, Institute of Mathematics, Siberian Division, Academy of Sciences, USSR) No 7(24), 1972, pp 35-44 (from RZh--Matematika, No 7, 1973, Abstract No 7V583)

Translation: A model of long-term runoff control for irrigation purposes is considered. It is based on the economic optimality criterion that the maximum part of the return on the capital investment be pure profit. Key design parameters of the "irrigation complex-irrigated agriculture" system are selected with the most important technical demands on their correlation taken into account. In this connection, the operation of the system is considered as a random process tied to the dynamics of river runoff. Simple formulas permitting the determination of a policy of the storage and use of water each year are obtained for a goal function of special form. A method is proposed for finding the optimal strategic parameters of irrigation (the capacity of the water reservoir and the irrigation area). Authors' abstract.

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USSR

UDC 621.396.677:523.164

KARDASHEV, N. S., PARIYSKIY, YU. N., SOKOLOV, A. G.

"Cosmic Radioastronomy"

Uspekhn. fiz. nauk (Progress in the Physical Sciences), 1971, Vol 104, No 2, pp 328-331 (from RZh-Radiotekhnika, No 10, Oct 71, Abstract No 10B14)

Translation: The prospects of research in the ordinary radioastronomy field were investigated without touching on the regions where the Earth's atmosphere and ionosphere are completely opaque. The restrictions preventing the creation of antennas on the Earth with reflector diameters >100 meters -- the presence of gravitational force leading to deformation of the structural elements -- are analyzed. The possibility of constructing antenna elements in space with dimensions as large as one might like is noted since the basic forces acting on a space antenna are the light pressure, the tidal force of the Earth and the centrifugal force on rotation. These forces are several orders less than the gravitational force. It is noted that in outer space it is possible to create continuous parabolic reflectors with dimensions on the order of 1 km and more. The advantage of space telescopes is also a significant reduction in the interference level. An important area of space radioastronomy is further improvement of the angular resolution by taking one of the

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KARDASHEV, N. S., et al., Uspekhn. fiz. nauk, 1971, Vol 104, No 2, pp 328-331

interferometer antennas a large distance beyond the limits of the Earth. For very large interferometer bases, it is also possible to construct a three-dimensional image of the sources, determine the trigonometric distances to the farthest sources and study the curvature of space. It is noted that a significant obstacle in creating space interferometers can be the effect of radio wave scattering in the interstellar medium. There are 2 illustrations and a 3-entry bibliography.

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1/2 026 UNCLASSIFIED PROCESSING DATE--11 DEC 70
TITLE--PULSARS AND NON THERMAL RADIO SOURCES -U-
AUTHOR--KARDASHEV, N.S.
COUNTRY OF INFO--USSR
SOURCE--ASTRONOMICHESKII ZHURNAL, VOL. 47, NO. 3, 1970, P. 465-478
DATE PUBLISHED-----70
SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS
TOPIC TAGS--PULSAR, COSMIC RADIO SOURCE, RADIO EMISSION, COSMIC RAY,
NEBULA, STAR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO-----FD70/605013/002 STEP NO--UR/0033/79/047/003/0465/0478
CIRC ACCESSION NO--AP0140389
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--11DEC79

CIRC ACCESSION NO--AP0140389

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. PHYSICAL PROCESSES IN GALACTIC AND EXTRA GALACTIC SOURCES OF NON THERMAL RADIOEMISSION ARE CONSIDERED ASSUMING THAT PULSARS ARE PRINCIPAL SOURCES OF MAGNETIC FIELD AND COSMIC RAYS. A SYSTEM OF EQUATIONS WAS DERIVED DESCRIBING ENVELOPES OF SUPERNOVAE AFTER AN EXPLOSION AND ON LATER STAGES. A STRUCTURE OF MAGNETIC FIELD IN SN ENVELOPES AND PULSARS IS INVESTIGATED. A MECHANISM OF PULSED RADIO EMISSION OF PULSARS AS A NONLINEAR TRANSFORMATION OF LOW FREQUENCY RADIATION WITH A PERIOD EQUAL TO PERIOD OF PULSAR ROTATION IS DISCUSSED. POSSIBILITIES OF EXPERIMENTAL VERIFICATION OF THIS MECHANISM ARE INDICATED. RADIO WAVE PROPAGATION IN PULSAR MAGNETOSPHERE IS DISCUSSED AS WELL AS PHENOMENA OF ANOMALOUS FARADAY ROTATION OF THE POLARIZATION PLANE AND TIME DELAY OF SIGNALS. POSSIBILITY OF OBSERVING PULSARS AFTER SN EXPLOSIONS IN THE NEARBY GALAXIES IS DISCUSSED. A METHOD OF DETERMINATION OF THE NUMBER OF PULSARS IS SUGGESTED ASSUMING THAT EXTRA GALACTIC RADIO SOURCES OF SYNCHROTRON EMISSION ARE CLUSTERS OF OBJECTS SIMILAR TO THE CRAB NEBULA. FACILITY: MOSKOVSKII GOSUDARSTVENNYI UNIVERSITET; AKADEMIIA NAUK SSSR, INSTITUT KOSMICHESKIKH ISSLEDOVANI, MOSCOW, USSR.

UNCLASSIFIED

KARDASHEV, Ts. D.

SO: JPRS 53272
02 JUN 71

UDC: 616-07-71:681.31

PROSPECTS OF USING ELECTRONIC COMPUTERS IN MEDICAL DIAGNOSTICS

Article by V. K. Kravets, Ts. D. Kardashev, A. S. Malev, (Sofiya); Moscow, Vostok Akademii Meditsinskoi Nauk SSSR, Russian, No 4, April 1971, pp 60-61

Making a diagnosis is a typical process of information processing that can arbitrarily be divided into three parts: 1) gathering information characterizing the patient's condition; 2) processing and evaluating it; 3) making a decision on the basis of the information obtained (N.M. Anosov; M.L. Bykhovskiy et al.).

The accuracy of the diagnosis made is determined by the fulness and reliability of information about the patient's condition. In other words, this information should contain data about the presence as well as severity of specific pathological changes (symptoms) in the patient's organism at the time of the examination and at the earlier stages of development of the disease. The quantity of such symptoms can be arbitrarily great, since, in view of the complex interdependency of numerous vital processes, any deviation from normal inevitably leads to onset of a series of disturbances. In practice, it is impossible to take into consideration all of the pathological changes occurring in the organism as the result of some specific disease, therefore in each concrete case a limited number of symptoms is picked out which are encountered the most often and which have the greatest diagnostic value. If possible, one should do without data obtained as a result of traumatic, painful, and lengthy diagnostic procedures.

Historically, in the development of medical diagnostics, one can distinguish three qualitatively different stages.

At the first stage, there is a direct link between the doctor and the patient, they form one information dipole. The doctor's success at this stage is determined entirely by the conditioning of his sensory organs which are capable of fixing the presence of little noticeable pathological changes. At this stage, the diagnostic process suffers from a number of substantial flaws the most important of which are: a) the data about the patient's condition are superficial, sub/active, and difficult to verify; b) the doctor's education and improvement of his knowledge constitute a

USSR

UDC 536.248.2

BARANENKO, V. I., KARDASHEV, YU. D.

"Investigation of Heat Transfer During Boiling by the Optical Method"

Tr. Nikolayevskogo korablestroit. in-ta (Works of the Nikolayev Shipbuilding Institute), 1970, Vol 33, pp 31-38 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 8, Aug 70, Abstract No 8.32.666)

Translation: Description is given of an experimental apparatus for the investigation of the mechanism of heat transfer during boiling in a large space with the help of a diffraction shadow interferometer. Results are presented of the calibration tests obtained during boiling of underheated water under the conditions of atmospheric pressure and a description is given of the method of computation of interference patterns. 4 ill., 5 bibl. entries.

Resume

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USSR

UDC 519.3

KARDASHOV, V. R., Chair of Computer Mathematics

"Conditions for the Differentiability of Integral Functionals"

Moscow, Vestnik Moskovskogo Universiteta, No. 6, Nov/Dec 70, pp 23-30

Abstract: Conditions for the existence of the Gato differential and for differentiability, in the sense of Gato and Freshet, of the integral functional $f(x) = \int_G F(t, x(t))dt$ defined in L_p spaces, $1 \leq p \leq \infty$, are found. The conditions for

Freshet differentiability are analogous to the corresponding conditions for Nemytskiy and Hammerstein operators, except that the conditions for Freshet differentiability of $f(x)$ found here do not assume the continuity of the derivative of the function $F(t, x)$ with respect to x . The theorems proved show that the differential properties of $f(x)$ are fully determined by the differential properties of the function $F(t, x)$ with respect to x and by conditions on the growth of the derivatives. It is noted that the theorems can be applied to a functional of two variables $f(x, y) = \int_G F(t, x(t), y(t))dt$ defined by the direct product of the spaces L_{p_1} and

L_{p_2} , $1 \leq p_1, p_2 \leq \infty$.

Card 1/1

USSR

KARDASHOV, V. R. (Chair of Computer Mathematics)

"Conditions for Differentiability of a Multivariate Functional of the Calculus of Variations"

Moscow, Vestnik Moskovskogo Universiteta: Matematika, Mekhanika; January-February, 1971; pp 23-30

ABSTRACT:

The paper presents conditions under which the functional $J(x) = \int F(t, x(t), Dx(t))dt$ defined on spaces $W_p^1(G)$, $1 \leq p \leq \infty$ has Gato's differential (directional derivative) and is differentiable after Gato and Frechet, as well as conditions which ensure the continuity and boundedness of the gradient of $J(x)$.

The gradient of $J(x)$ is written on a set $W_p^1[g]$ of functions satisfying the condition $x(t)|_\Gamma = g(t)|_\Gamma$, where $g(t) \in W_p^1(G)$ is a given function, Γ is the boundary of the domain G .

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1/3 015 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--COMPOSITION OF PEROXIDES AND ACIDS OF FURFURAL CONDENSATES -U-
AUTHOR--KARDAYLOVA, K.M., ABRAMYANTS, S.V., KULNEVICH, V.G.
COUNTRY OF INFO--USSR
SOURCE--GIDROLIZ. LESOKHIM. PROM. 1970, 23(1) 8-9
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FURFURAL, PEROXIDE, CARBOXYLIC ACID, FORMIC ACID, MALEIC ACID,
SUCCINIC ACID, PROCESSED PLANT PRODUCT, POLAROGRAPHY, CHROMATOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0145

STEP NO--UR/0328/70/023/001/0003/0009

CIRC ACCESSION NO--AP0106808

UNCLASSIFIED

2/3 015

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106808

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SUNFLOWER HUSKS WERE HYDROLYZED IN A PILOT PLANT APP. AND EVERY 10 MIN, SAMPLES OF THE HYDROLYZATE DISCHARGED WERE ANALYZED FOR THEIR CONTENTS OF PEROXIDES AND ACIDS, AS WELL AS OF FURFURAL. ORG. ACIDS WERE SEPD. BY COLUMN CHROMATOG. ON SILICA GEL, H SUB2 O SUB2 WAS DETD. BY CERIMETRY, PERACIDS BY IODOMETRY, AND SOME PEROXY COMPS. BY POLAROGRAPHY. THE MAX. FORMATION OF PEROXIDES WAS OBSD. DURING THE HEATING PERIOD; THEY WERE DISCHARGED DURING THE 1ST 10-15 MIN OF FURFURAL VAPOR EVOLUTION. AT THE END OF THE HEATING PERIOD, THERE WAS 5-9 MG PEROXIDE O-MOLE FURFURAL. THE CONCN. OF H SUB2 O SUB2 AND PERACIDS WAS THE HIGHEST AT THE BEGINNING AND AT THE END OF THE COOK. PYROMUCIC, FUMARIC, ACETIC, BETA FORMYLACRYLIC, FORMIC, MALEIC, AND SUCCINIC ACIDS WERE FOUND. A COMPARISON OF THE DATA WITH THOSE OBTAINED IN LAB. AUTOXIDN. OF FURFURAL SHOWED THAT FURFURAL REACTS WITH O IN THE HYDROLYZER. EXCEPT FOR HOAC, WHICH ORIGINATES FROM HYDROLYSIS OF PLANT TISSUES, ALL ACIDS ARE THE PRODUCTS OF FURFURAL AUTOXIDN. BY A CHAIN REACTION IN THE PRESENCE OF ATM. O. THE PEROXIDES CANNOT SERVE AS AN INDEX OF OXIDIZABILITY BECAUSE OF THEIR LABILE NATURE. A MORE RELIABLE INDEX WOULD BE THE CONCN. OF ACIDS, BUT HERE ALSO THEIR CONVERSION AT HIGH TEMP. MUST BE TAKEN INTO CONSIDERATION. THE MOST STABLE OF THE ACIDS IS HCO SUB2 H AND ITS YIELD CAN SERVE AS AN INDEX OF FURFURAL LOSSES BY OXIDN. IN THE HYDROLYZER. ACCORDING TO THIS INDEX, THE AMT. OF FURFURAL FORMED IN THE HYDROLYZER IS SIMILAR TO 130PERCENT IF THE ACTUAL YIELD IS TAKEN AS 100PERCENT. FURTHER LOSSES OCCUR THROUGH DEGRADATION OF PENTOSE WITHOUT FURFURAL FORMATION.

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3/3 015

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106808

ABSTRACT/EXTRACT--THUS, THE ROLE OF MOL. O DURING HYDROLYSIS IS MORE IMPORTANT THAN THAT GENERALLY ASSUMED, AND SPECIAL MEASURES ARE NEEDED TO PREVENT OR AT LEAST REDUCE THE LOSSES. REPLACEMENT OF O BY CO SUR2 INCREASES THE YIELD OF FURFURAL BY 12-15PERCENT. UNDER INDUSTRIAL CONDITIONS, REDN. OF OXIDN. NOT ONLY INCREASES THE FURFURAL YIELD, BUT ALSO IMPROVES THE QUALITY OF THE PRODUCTS FROM PLANT MATERIAL HYDROLYZATES.

UNCLASSIFIED

Corrosion

USSR

UDC: 621.771.23.011

KARDONOV, B. A., SHTIRTS, V. V., BYKOVSKIY, G. S., KOROBV, A. G.

"Rolling of Sheets of Highly Corrosion-Resistant Alloy"

Moscow, Metallurg, No 12, Dec 73, pp 25-27.

Abstract: EP-567 alloy has been recommended for chemical equipment which must be used in corrosive media such as acetic acid. The alloy, containing not over 0.03% C, not over 0.015% Si, not over 1.0% Mn, 14.5-16.5% Cr, 15-17% Mo, 3-4.5% W, not over 1.5% Fe, remainder Ni, has satisfactory ductility in the 950-1220° C temperature range. This alloy has high tensile strength and deformation resistance, resulting from the high content of molybdenum and tungsten. Considering the peculiarities of the alloy, the Central Scientific Research Institute for Ferrous Metallurgy and the Ashinskiy Metallurgical Plant have developed and introduced a technology for production of sheets on a reversing quarto 1500 mill. This article studies the strength and ductility characteristics of the alloy in the 900-1250° C temperature interval. The technology developed can produce hot-rolled strips measuring 1000 by 2000 mm (4-10 mm thick). Sheets 1.5 to 2 mm thick with the same dimensions are produced on a quarto 1400 mill by cold rolling. The rolling forces do not exceed

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USSR

Kardonov, B. A., Shtirts, V. V., Bykovskiy, G. S., Korobov, A. G., Moscow, Metallurg, No 12, Dec 73, pp 25-27.

the permissible forces for these mills. The corrosion resistance and mechanical properties of the finished sheets satisfy the requirements of consumers. The technological instruction calls for multipass rolling (60-55) → 10 → 6 → 4 mm; metal heated to 1180-1200° C; heating time of metal calculated at 2 min/mm thickness before rolling; temperature at mill exit at least 950° C; compression per pass not over 5 mm.

1/2 021 UNCLASSIFIED
TITLE--OPTICAL FOURIER SYNTHESIS -U-

PROCESSING DATE--20NOV70

AUTHOR--(02)--ZOLOTUKHIN, A.A., KARDONSKIY, V.M.

COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(1), 160-1

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--X RAY DIFFRACTION, CRYSTAL STRUCTURE, OPTIC PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1995/0918

STEP NO--UR/0070/70/015/001/0160/0161

CIRC ACCESSION NO--AP0116428

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0116428

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EXPT. DEMONSTRATING THE POSSIBILITY OF OPTICAL FOURIER SYNTHESIS OF CRYSTAL STRUCTURES IS DESCRIBED. MARCASITE, FeS SUB2, WAS CHOSEN AS AN EXAMPLE. PERFORATED OPAQUE SCREENS WERE USED TO SIMULATE X RAY DIFFRACTION PATTERNS OF MARCASITE, THE CIRCULAR ORIFICES BEING PLACED AT POSITIONS CORRESPONDING TO THE h_k00 POINTS IN THE RECIPROCAL LATTICE OF MARCASITE AND HAVING AREAS PROPORTIONAL TO THE CORRESPONDING STRUCTURAL AMPLITUDES.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--TRANSMITTANCE AT THE NAUGARZAN ASTRONOMICAL STATION -U-

AUTHOR--(02)--KARDOPOLOV, V.I., SLUTSKIY, V.YE. K

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK UZBEKSKOI SSR, IZVESTIIA, SERIIA FIZIKO
MATEMATICHESKIKH NAUK, VOL. 14, NO. 1, 1970, P. 62-64
DATE PUBLISHED-----70

SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS

TOPIC TAGS--ASTRONOMIC OBSERVATORY, SPECTRAL DISTRIBUTION, MARS PLANET,
LIGHT TRANSMISSION, PARTICLE SCATTER/(U)NAUGARZAN ASTRONOMICAL STATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1254

STEP NO--UR/0165/70/014/001/0062/0064

CIRC ACCESSION NO--AP0124905

UNCLASSIFIED

2/2 026 UNCLASSIFIED PROCESSING DATE--27NOV70
CIRC ACCESSION NO--AP0124905
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DETERMINATION OF THE SPECTRAL
TRANSMITTANCE COEFFICIENTS AT NAUGARZAN BY BOUGUER'S METHOD FROM THE
SPECTRA OF MARS AND ALPHA 800 PHOTOGRAPHED AT ZENITH DISTANCES RANGING
FROM 35 TO 85DEGREES. THE EQUIPMENT USED IN THE EXPERIMENTS IS
DESCRIBED. THE PRESENCE OF LARGE PARTICLES IS DETECTED, AND IT IS SHOWN
THAT NEUTRAL SCATTERING ON THE LARGE PARTICLES IS FOUR TO FIVE TIMES THE
SELECTIVE SCATTERING ON SMALL PARTICLES. THE CURVE OF THE MEAN
TRANSMITTANCE COEFFICIENT VS WAVELENGTH FOR NAUGARZAN IS SIMILAR TO THAT
FOR MOUNT WHITNEY. FACILITY: AKADEMIIA NAUK UZBEKSKOI SSR,
ASTRONOMICHESKII INSTITUT, TASHKENT, UZBEK SSR.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--NORMS OF THE ENZYMIC ACTIVITY OF LEUKOCYTES -U-
AUTHOR--(05)-MIKHEYEVA, A.I., KARDOS, V.S., KLIONSKAYA, A.G., MAGID, E.M.,
MAGID, A.E.
COUNTRY OF INFO--USSR
SOURCE--LAB. DELO 1970, (1), 5-7
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--LEUKOCYTE, ENZYME ACTIVITY, LYMPHOCYTE, ESTERASE, PHOSPHATASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0212 STEP NO--UR/9099/70/000/001/0005/0007
CIRC ACCESSION NO--AP0119208
UNCLASSIFIED

272 014

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119208

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ENZYMIC ACTIVITIES IN LEUKOCYTES OF 50 HEALTHY MEN WERE DETD. BY THE KAPLOW METHOD (1955). ALK. PHOSPHATASE IN NEUTROPHILS WAS 5-67 UNITS, MEAN 27.5 UNITS. ACCORDING TO THE ACTIVITY OF ACID PHOSPHATASE (I) LEUKOCYTES WERE CLASSED INTO 4 GROUPS. (1) NO TIVITY F CYOPLASMA DI NOT CONT IN GRANULES (2) CYTO LA ZA W TH ZS THM O EQ L T 5 RA LES () 6-20. (4) LARGER THAN 20 GRANULES. IN NEUTROPHILS, THE 1ST 2 GROUPS WERE MOST COMMON (MEAN 38.6 UNITS); 8-62PERCENT OF THE NEUTROPHILS CONTAINED I. LYMPHOCYTES CONTAINED 6-60 UNITS (MEAN 26.8 UNITS) I. NONSPECIFIC ESTERASE (II) ALSO CLASSED LEUKOCYTES INTO THE SAME GROUPS AS I AND IN NEUTROPHILS IT ACTIVITY WAS T HATOF LEUKO Y GROUPS 3; 20-90PE CENT OF THE LYMPHOCYTES XONTAIN D TIVE II (1-13 UN TS, MEAN 72.4 UNITS). FACILITY: GL. KLIN. VOEN. GOS. IM. BURDENKO, MOSCOW, USSR.

UNCLASSIFIED

Automotive

USSR

UDC 621.842.2-585.862-183.2:620.178.311.4

RODZEVICH, N. V., Candidate of Technical Sciences, AFONSKIY, V. P., Engineer,
KARDOVSKIY, V. S., Engineer, ZHUK, Ye. I., Candidate of Technical Sciences,
KOMONENKO, P. D., Engineer and CHAPALA, N. P., Engineer

"Strength of Heavy Drive Shafts"

Moscow, Vestnik Mashinostroyeniya, No 1, Jan 71, pages 28-30

Abstract: This article presents the results of a study of the strength of the drive shafts used in the power trains of heavy trucks and other transport equipment. The two types studied were designed for transmission of torques of 300 and 600 kgm. The weakest links in the heavy drive shafts when tested without rocking in bearings were the forks and X-members of the universal joints. Cracks arose in the drive shafts in areas where tensile stresses were concentrated (apertures, notches, welded joints, spline ends, separation of induction-annealed layers, etc.). In order to achieve equal strength of elements and increase the load-bearing capacity of heavy drive shafts, it is recommended that continuous splined forks of type 38KhMYuA steel with

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USSR

RODZEVICH, N. V., et al, Vestnik Mashinostroyeniya, No 1, Jan 71,
pgs 26-30

nitrided surfaces be used. The notches designed to retain the end caps of tubular splined forks should be eliminated. The X-members should be strengthened by moving the oil aperture to the end of the member and increasing the radius of the fillet in the area of transition between the cylindrical portion of the pin and the central portion of the X-member.

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- 20 -

USSR

KARDYROV, G. K., SAFAROV, M. I.

"Activity of the Enzyme Glutamate Decarboxylase in Some Structures of the Brain and Spinal Cord After the Action of Inhaled Benzene on the Organism"

Izv. Akad. Nauk AzSSR, Ser. biol. n. (Bulletin of Azherbijian SSR Academy of Sciences, Biological Sciences Series), 1973, No 2, pp 88-92) (from Referativnyy Zhurnal, 30F, Biologicheskaya Khimiya, No 18, 25 September 1973, abstract No 18F1736)

Translation: Under extreme conditions of the state of the organism due to the action of a high concentration of inhaled benzene, the activity of glutamate decarboxylase is increased in the brain but insignificantly so in the spinal cord.

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USSR

UDC 539.3

KARDZHIYEV, N.

"Exact Equations of the Force Method for Tissue Shells"

Teor. i pril. mekh. I Nats. kongres, Varna, 1969. Kn. 2 (Theory and Application of Mechanics. I. National Congress, Varna, 1969. Book 2), Sofiya, 1971, pp 391-397 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V155)

Translation: The equilibrium equations of a grid shell are written in vector form. By identically satisfying the equilibrium equations of an element, the author reduces the problem to a single nonlinear consistency equation relative to the vector stress function. The possibilities of a variational formulation of the problem are discussed. 6 ref. V. L. Biderman.

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L/2 008 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--SYNTHESIS OF 4,PHENOXYBIPHENYL -U-
AUTHOR--(04)-BARONI, YE.YE., KAREGISHVILI, L.I., KOVYZINA, K.A.,
RADAIKINA, L.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(3), 719-20
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHEMICAL SYNTHESIS, BENZENE DERIVATIVE, OXYGEN COMPOUND,
POLYNUCLEAR HYDROCARBON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/0341 STEP NO--UR/0080/70/043/003/0719/0720
CIRC ACCESSION NO--AP0111535
UNCLASSIFIED

Z/2 008

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0111535

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDING 4.8 ML HNO SUB3 (D. 1.4) OVER 70 MIN TO A MIXT. OF 38.5 G PH SUB2, 100 ML HOAC, 31.8 G IODINE, AND 27.5 ML H SUB2 SO SUB4 (D. 1.84) AT 34-6DEGREES GAVE 54PERCENT 4,PHC SUB6 H SUB4 I (I), M. 112DEGREES (ETOH). REACTION OF 70 G I WITH KOPH (FROM 45.5 G PHOH AND 15.4 G KOH) 6 HR IN THE PRESENCE OF 1.5 G POWD. CU AT 270-90DEGREES GAVE 97PERCENT 4,PHOC SUB6 H SUB4 PH (II), B SUB2 160DEGREES, M. 68-9DEGREES. COM. FEASIBLE PREPN. OF II FROM PHBR AND 4,PHC SUB6, H SUB4 OH (III) WAS STUDIED WITH RESPECT TO REACTANT RATIO AND REACTION TIME AND TEMP. II YIELDS WERE MAX. (89.2PERCENT) WHEN 25 G III, 12 G KOH, 0.75 G CU, AND 40 ML PHBR WAS HEATED FIRST AT 180DEGREES UNDER A DEPHLEGATOR 2.5 HR WITH DISTN. OF H SUB2 O FORMED IN THE REACTION AND THEN 1.5 HR AT 300DEGREES; THE MIXT., COOLED TO 50DEGREES, WAS TREATED WITH 50 ML AQ. 20PERCENT KOH, AND THE FILTERED, WASHED, DRIED PRODUCT WAS VACUUM DISTO. FACILITY: SUKHUM. FIZ.-TEKH. INST., SUKHUMI, USSR.

UNCLASSIFIED

1/2 019

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--THE NAME OF A MILITARY LEADER IS GIVEN TO THE ACADEMY -U-

AUTHOR--KARELIN, A.

K

COUNTRY OF INFO--USSR

SOURCE--KRASNAYA ZVEZDA, JUNE 30, 1970, P 4, COLS 3-4

DATE PUBLISHED--30JUN70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--MILITARY SCHOOL, MILITARY PERSONNEL, CHEMICAL WARFARE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAHE--1993/0083

STEP NO--UR/9008/70/000/000/0004/0004

CIRC ACCESSION NO--AN0113061

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AN0113061

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MILITARY RED BANNER ACADEMY OF CHEMICAL WARFARE HAS BEEN HONORED BY ATTACHING TO ITS NAME THE NAME OF MARSHALL S. TIMOSHENKO. AT A MEETING HELD TO CELEBRATE THIS EVENT, GENERAL LIEUTENANT OF TECHNICAL FORCES V. K. PIKALOV, COMMANDING GENERAL OF CHEMICAL WARFARE FORCES OF THE MINISTRY OF DEFENSE, COLONEL A. A. KIZIMA, CANDIDATE OF HISTORICAL SCIENCES, CAPTAIN G. D. KUDRYAVTSEV, STUDENT OF THE COMMAND SCHOOL, AND V. K. YEREMENKO, AN EMPLOYEE OF THE SOVIET ARMY, GAVE SPEECHES.

UNCLASSIFIED

USSR

KARELIN, A. A.

"The Effects of Ethionine Poisoning on the Activities of Enzymes Involved in Creatine Biosynthesis in the Rat Pancreas"

Byul. Eksperim. Biol. i Med., Vol 74, No 10, 1972, pp 39-42 (from Referativnyy Zhurnal — Biologicheskaya Khimiya, No 5, 1973, Abstract No 5F2291)

Translation: A single intraperitoneal administration of DL-ethionine (I) (1 g/kg) to male rats completely inhibits guanidoacetate methylferase (EC 2.1.1.2) 3-48 h after administration, an enzyme in the second step of creatine synthesis; the activity of glycine amidinotransferase (I; EC 2.1.4.1)— the enzyme of the first step of creatine synthesis — increases sharply 3 h after poisoning, and then gradually decreases. The increase in the activity of I after 3 h is accompanied by a 6-7 fold decrease in the pancreatic concentration of creatine. Inhibitors of protein synthesis, actinomycin and cyclohexamide, inhibit the increase in the activity of I; concomitantly, pancreatic creatine content increases.

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USSR

UDC: 669'255'295'24:620.17

KARELIN, A. G., KASHUK, V. A.

"Study of Properties of Cast Cobalt with the Addition of Titanium and Nickel"

Sb. Nauch. Tr. Tomsk. Inzh.-Stroit. In-t [Collected Scientific Works of Tomsk Institute of Construction Engineering], 1973, No 21, pp 55-67 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 81699, by L. Petrova).

Translation: The influence of slight additions of Ti and Ni in quantities of 0.05, 0.1, 0.2, 0.35, 0.5, 0.55, 0.8, 1.0, 1.2, 1.6% on the macro- and micro-structure, microhardness and ρ of cast Co (99.98%), produced in a type LPZ-67 high frequency installation under a layer of flux or in Ar was studied. The additives were introduced in the form of Co-Me master alloys. The maximum grain size reduction was observed for 0.35 at. % Ti, while higher concentrations caused an increase in grain size. Ni decreases grain size slightly, and the curve is continuous. Ti and Ni increase microhardness and ρ of Co, Ti acting more strongly than Ni, particularly on ρ . 6 figures, 3 tables, 28 biblio. refs.

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1/2 032 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--INFRARED ABSORPTION SPECTRA AND STRUCTURE OF THE CLO PRIME2
POSITIVE CATION -U-
AUTHOR-(04)-KARLIN, A.I., NIKITINA, Z.K., KHARITONOV, YU.YA.,
RGSOLCVSKIY, V.YA.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(4), 941-8
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--IR ABSORPTION, CHLORINE COMPOUND, FLUORIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1229 STEP NO--UR/0078/70/015/004/0941/0948
CIRC ACCESSION NO--AP0123193
UNCLASSIFIED

2/2 032

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123193

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IR SPECTRA OF CLO SUB2 BF SUB4, CLO SUB2 SBF SUB6, AND CLO SUB2 SB SUB3 F SUB16 ARE GIVEN THE ASSIGNMENT OF MAX. IS TABULATED. THE STUDY REVEALS THAT CLO SUB2 PRIME POSITIVE HAS OCLO SIMILAR TO 119DEGREES. ANAL OF NORMAL MODES OF VIBRATION OF CLO SUB2 PRIME NEGATIVE, CLO SUB2 PRIME POSITIVE, AND CLO SUB2 IS GIVEN AND THE RESULTS ARE COMPARED WITH EXPTL. DATA ON CLO SUB3 PRIME NEGATIVE, CLO SUB4 PRIME NEGATIVE, AND CLO PRIME NEGATIVE. THE CALCD. DELTAH DEGREES OF FORMATION (FROM AT. SPECIES) OF CLO SUB2 PRIME NEGATIVE, CLO SUB2, AND CLO SUB2 PRIME POSITIVE IS 114.5, 123, AND 167 KCAL-MOLE, RESP.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--ALUMINUM NITRATE COMPLEXES -U-
AUTHOR-(04)-RCSGLOVSKIY, V.YA., SHIROKOVA, G.N., KARELIN, A.T., KRIVISOV,
N.V.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(3), 622-4
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ALUMINUM NITRATE, ALUMINUM COMPLEX, CESIUM COMPOUND, CHEMICAL
DECOMPOSITION, HEAT OF SOLUTION, HEAT OF FORMATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/0225 STEP NO--UR/0020/70/191/003/0622/0624
CIRC ACCESSION NO--ATO132497
UNCLASSIFIED

2/2 017


UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0132497

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDING A 4-8 FOLD EXCESS OF N SUB2 O SUB5, CONTG. HNO SUB3 IMPURITIES, TO AN EQUIMOLAR MIXT. OF CSNO SUB3 AND ALBR SUB3 AT MINUS 196DEGREES GAVE, ON WARMING UP SLOWLY AND REMOVAL OF VOLATILES IN VACUO, CS(AL(NO SUB3) SUB4). MIXING ALBR SUB3 WITH AN EXCESS OF DRY N SUB2 O SUB5 AT MOLAR RATIOS FROM 1:20 TO 1:30, REMOVING VOLATILES IN VACUO AFTER 12 HR AT 0DEGREES, ADDING A NEW PORTION OF N SUB2 O SUB5, AND STIRRING AT 0DEGREES GAVE NO SUB2 (AL(NO SUB3) SUB4). BOTH COMPS. ARE CRYST., HYGROSCOPIC, SOL. IN H SUB2 O DECOMP. INTO CS PRIME POSITIVE, AL PRIME POSITIVE, AND NO SUB3 PRIME NEGATIVE. CS(AL(NO SUB3) SUB4) AT 100DEGREES FORMED NO SUB2 AND O. IT DECOMP. COMPLETELY AT 300DEGREES GIVING CSNO SUB3 AND AL SUB2 O SUB3. NO SUB2 (AL(NO SUB3) SUB4), M. 85DEGREES, DECOMP. AT 110-35DEGREES INTO AL SUB2 O SUB3, NO SUB2, AND O; ITS HEAT OF SOLN. IN H SUB2 O AT 25DEGREES IS MINUS 69.0 PLUS OR MINUS 0.1 KCAL.-MOLE AND ENTHALPY OF FORMATION H SUB298 EQUALS MINUS 238.4 PLUS OR MINUS 1.0 KCAL.-MOLE. FACILITY: INST. NOYKHKHIM. PROBL., CHERNOGOLOVKA, USSR.

UNCLASSIFIED

1/2 017 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--THE UNDERWATER IRRADIANCE METER FMPO-64 AND ITS USE FOR THE OPTICAL
STUDIES IN THE SEA -U-
AUTHOR-(02)-KARELIN, A.K., PELEVIN, V.N. 
COUNTRY OF INFO--USSR
SOURCE--OKEANOLOGIYA, 1970, VOL 10, NR 2, PP 369-373
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--SEA WATER, LIGHT ABSORPTION, UNDERWATER EQUIPMENT, UNDERWATER
OPTICS, INDEX, OCEANOGRAPHIC INSTRUMENT

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1990/1281 STEP NO--UR/0213/70/010/002/0369/0373
CIRC ACCESSION NO--AP0109365
UNCLASSIFIED

2/2 017 UNCLASSIFIED PROCESSING DATE--02OCT70
CIRC ACCESSION NO--AP0109365
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A NEW DESIGN OF THE UNDERWATER
IRRADIANCE METER IS DESCRIBED. THE INSTRUMENT ENABLES ONE TO OBTAIN A
COMPLETE SET OF DATA NECESSARY FOR COMPUTING LIGHT ABSORPTION INDEX OF
THE SEA WATER. SOME EXAMPLES OF THE DETERMINATION OF THE ABSORPTION
INDEX IN THE SEA ARE PRESENTED. FACILITY: INSTITUT OKEANOLOGII
IM. P. P. SHIRSHOVA AN SSSR.

UNCLASSIFIED

USSR

UDC 621.762:669.018.5(088.8)

AMOSOV, V. M., KARELIN, B. A., KITAYEV, B. L., SAVICHEVA, M. A., GUSEV, A. M.,
PAPILOV, V. P., and STEPANOVA, T. I.

"Powder Metal Alloy"

USSR Author's Certificate No 254092, filed 12 Jun 69, published 20 Mar 70
(from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11G357 P)

Translation: A powder metal electrode alloy based on W is proposed for spark gaps. To stabilize the emission properties and to increase the rate of electrode atomization barium zirconate is introduced into the alloy composition. The barium zirconate possesses stable properties under the conditions of exploitation and does not interact with the remaining components of alloy during sintering in the temperature interval 1550-1600°. The alloy is of the following composition: 0.5-4% Ni, 4-5% barium zirconate, and the remainder -- W. The alloy structure is in the form of fine-grain W, coated with solid W solution in Ni, and dispersed particles of barium zirconate uniformly distributed in grains and along grain boundaries.

V. Chelnokov

1/1

USSR

UDC 005.513.5:025.135(088.8)(47)

GOLDYREV, V. I., KARELIN, B. V., TYUTIKOV, L. S., Scientific Research Institute of Control Computers and Systems

"A Device for Retrieving Edge-Punched Cards"

USSR Author's Certificate No 318969, Division G, filed 9 Mar 70, published 24 Jan 72 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 72, abstract No 11B344P)

Translation: A device is proposed which contains a base, a vibration platform, a punchcard magazine with support strips, and selector racks which are kinematically coupled to the keyboard levers of the code set-up mechanism. In order to increase speed, the device contains double-arm levers with the selector rack fastened on one arm, while the other arm is connected to the keyboard lever of the code set-up mechanism. Four illustrations.

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USSR

UDC 002.513.5:676.815

KARELIN, B. V., and BATUYEV, S. N.

"Study of Uniterm-Card-Type Information Media"

Moscow, Nauchno-Tekhnicheskaya Informatsiya, Seriya 1, Organizatsiya i Metodika Informatsionnoy Raboty, No 5, 1972, pp 18-20

Abstract: The article describes a new method of recording numbers of documents on uniterm cards which cuts down on card area and number comparison time. The Scientific Research Institute of Control Machines and Systems compared this method with M. TAUBE's method in an experiment involving the use of descriptor language. The results indicate a time saving of 12-28 percent and a card area reduction of 6-18 percent. The method is being used in the instrument-manufacture sectorial information-retrieval system "Referat" (Abstract).

Computers: Digital

USSR

DOC: 005.013.5:025.135

GOLDYREV, V. I., KARELIN, B. V., TYUTIKOV, L. S., Scientific Research
Institute of Control Computers and Systems

"A Device for Retrieval of Edge-Punched Cards"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki,
No 32, Nov 71, Author's Certificate No 318969, Division G, filed 9 Mar 70,
published 28 Oct 71

Translation: This Author's Certificate introduces a device for retrieval
of edge-punched cards. The unit consists of a base, a vibration platform,
a punchcard magazine with support fingers, and selector racks which are
kinematically coupled to the key levers of a code setup mechanism. As a
distinguishing feature of the patent, the speed of the device is increased
by using two-armed levers with a selector rack coupled to one arm and a
key lever of the code setup mechanism connected to the other.

1/1

USSR

UDC 547.772'539.4

KARELE, B. YA., KALNIN', S. V., GRINBERG, I. P., and NEYLAND, O. YA., Riga
Polytechnical Institute

"Iodonium Derivatives of Heterocyclic Compounds. I. Phenyliodonium Salts
and Betaines of Pyrazoles"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 2, Feb 73, pp 245-248

Abstract: A method was developed for the synthesis of phenyliodonium derivatives of pyrazoles. Reaction of pyrazole, 3,5-diphenylpyrazoles and 3,5-dienthylpyrazoles with phenyliodosoacetate in presence of p-toluene-sulfonic acid yields the tosylates of 4-phenyliodoniopyrazoles which upon treatment with alkali convert to 4-phenyliodoniopyrazole betaines. By means of exchange reactions the tosylates were converted to respective chlorides, bromides and iodides. Betaines reacted with hydrogen fluoride and hydrogen borofluoride to yield 4-phenyliodoniopyrazole fluorides and borofluorides. On the basis of electron absorption spectra the ionization constants of a series of phenyliodonium derivatives of pyrazoles have been calculated. 4-Phenyliodonium group increases the acidity of pyrazoles by 4.5-5 orders of magnitude.

1/1

USSR

UDC 534.121.2:661.7

APEL'TSIN, I. E., KARELIN, F. N., LISHNEVSKIY, V. A., DUBYAGA, V. P.,
PEREPECHKIN, L. P., MIRONOVA, E. V., and ZAYCHUKOVA, N. A.

"Acetylcellulose Membranes for Desalination of Water by Hyperfiltration"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 6, 1971, pp 18-19.

Abstract: Three types of membranes are reported suitable for water desalination. One prepared from an acetone solution of acetylcellulose "Etrol B" with a small quantity of water and magnesium perchlorate was deposited on glass at -12°C , kept in air for 3.5 min, the membrane was separated from glass and kept in water at 80° for 70 min. Such a membrane gave a 84-88% desalination with $500 \text{ l/m}^2\cdot\text{day}$ of water passage at 50 atm pressure. Using the same "Etrol B" acetyl cellulose in acetone and formamide, the membrane was formed on glass at 18°C , then treated at 80°C for 30 min. This membrane gave a 83-85% desalination with $800 \text{ l/m}^2\cdot\text{day}$ passage capacity at 50 atm pressure. Acetyl cellulose membranes prepared from acetic acid solution containing triethanolamine acetate and sulfate admixtures gave a 90-91% desalination with $300 \text{ l/m}^2\cdot\text{day}$ passage of water at 65 atm pressure..

1/1

USSR

UDC 389.0.681.2.083.7

VOSTRIKOV, Yu. A. and KARELIN, N. M.

"Application of Asymptotic Methods for Seeking the Distribution Laws of the Metrological Characteristics of a Remote-Acting Differential-Transformer Measuring System".

Moscow, Metrologiya, No 7, 1972, pp 3-9

Abstract: The problem of seeking the distribution laws of the metrologic characteristics of a remote-acting differential-transformer measuring system is dealt with. These characteristics are nonlinear functions of many random arguments. The application of asymptotic methods permits the desired distribution laws to be obtained in the form of approximate expressions that are suitable for use in practice. Three asymptotic formulas are derived, which yield good results even in the first approximation if the remainder is smaller than unity even by one order of magnitude. If the remainder of the first approximation is insufficiently small, a second approximation can yield satisfactorily exact approximate results. But if the remainder of the second approximation is still too large, the asymptotic formulas cannot be used for approximate calculations. 1 table. 1 figure. 5 references.

1/1

USSR

MELIKHOV, A. N., KARELIN, V. P. and KUREYCHIK, V. M.

"Cutting of a Graph into Subgraphs"

Mat. Modelir. i Teoriya Elektr. Tsepey [Mathematical Modeling in the Theory of Electric Circuits -- Collection of Works], No 10, Kiev, Nauk. Dumka Press, 1973, pp 70-75 (Translated from Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No (V417)

Translation: Problems of the cutting of arbitrary finite graphs into maximally connected subgraphs are studied. A formal method is suggested for solution of this problem. The method is based on the determination of permutations maximizing the number of units in the diagonal sections of a contiguity matrix of the initial graph. The algorithm suggested is used to write and debug a program for optimal sectioning of graphs on the Minsk-22 computer.

Author's view

1/1

USSR

UDC: 577.4

MELIKHOV, A. N., GUZIK, V. F., KARELIN, V. P., MIRONOV, B. N.

"On Optimizing the Adjustment of Linear Digital Integrating Structures"

V sb. Vychisl. sistemy (Computer Systems--collection of works),
vyp. 47, Novosibirsk, 1971, pp 18-31 (from RZh-Kibernetika, No
8, Aug 72, Abstract No 8V452)

[No abstract]

1/1

USSR

UDC: 51:621.391

MELIKHOV, A. N., BERSHETYN, L. S., KARELIN, V. P.

"On Isomorphic Embedding of Graphs and Abstract Automata"

Tr. Seminara po metodam mat. modelir. i teorii elektr. tsepey. In-t kibernet.
AN USSR (Works of the Seminar on Methods of Mathematical Modeling and Electric
Circuit Theory. Institute of Cybernetics, Academy of Sciences of the UkrSSR),
1970, vyp. 7, pp 95-104 (from RZh-Kibernetika, No 1, Jan 71, Abstract No 1V334)

Translation: Algorithms are described for recognition of isomorphic embedding
of graphs and abstract automata. In the authors' opinion, these algorithms
are suitable for realization on digital computers. Some properties of iso-
morphic embeddings of graphs and automata are established.

1/1

- 7 -

USSR

UDC: 661.143

BOZHEVOL'NOV, V. Ye., PRISELKOVA, K. D., SOLOV'YEV, B. N.,
ZARUBIN, O. V., KARELIN, V. V.

"Preparation of Continuous-Action Brightness Standards"

Sb. Nauch. tr. VNII lyuminoforov i osobo chist. veshchestv
(Collected Scientific Works of the All-Union Scientific Re-
search Institute of Phosphors and Extra Pure Substances),
1971, vyp. 6, pp 95-98 (from RZh-Khimiya, No 15, Aug 72,
Abstract No 15L187)

Translation: New methods are proposed for making phosphor brightness standards for the green, blue and orange regions of the spectrum in the form of polymer discs and flexible screens. These methods are simpler and more reliable than conventional methods, and are suitable for all grades of phosphors. Standards based on C^{14} are exceptionally stable (25% brightness fall-off in three years), and also are distinguished by high brightness, mechanical strength, and will withstand being kept for several days in a ferrous sulfate dosimetric solution without losing brightness. Standards made with tritium are safe from the dosimetric standpoint and have high mechanical strength and constant brightness yield (drop in brightness only 3-4% in one year).

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1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--PURIFICATION OF PETROLEUM INDUSTRY WASTE WATERS BY PRESSURIZED
SETTLING -U-
AUTHOR--(03)-KARELIN, YA.A., PALIY, P.A., SOKOLOV, A.G.
COUNTRY OF INFO--USSR
SOURCE--NEFT. KHUZ. 1970, 48(3), 63-5
DATE PUBLISHED-----70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, MATERIALS
TOPIC TAGS--PETROLEUM INDUSTRY, INDUSTRIAL WATER, WATER PURIFICATION,
PETROLEUM PRODUCT, WATER POLLUTION CONTROL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3005/1955 STEP NO--UR/0093/70/048/003/0063/0065
CIRC ACCESSION NO--AP0133799
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133799

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WATERS CONTG. 50-100 MG-L.
SUSPENDED MATTER, OBTAINED FROM THERMAL CHEM. DEHYDRATION OF GAS SATD.
PETROLEUMS, WAS PURIFIED BY SETTLING IN HORIZONTAL AND SPHERICAL TANKS
AND COULD BE INJECTED INTO DISPOSAL AND PRODUCTIVE WELLS IN HIGHLY
FRACTURED STRATA. THE METHOD WAS A PRELIMINARY TREATMENT FOR WATER
INTENDED TO BE FILTERED FOR FLOODING PRODUCTIVE STRATA.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE—30OCT70
TITLE—EXAMINATION OF TRANSAMIDINASE AMIDINOTRANSFERASE ACTIVITY IN THE
BLOOD SERUM OF DOGS WITH EXPERIMENTAL PANCREONECROSIS -U-
AUTHOR—(03)—MARDASHEV, S.R., KARELINA, A.A., KARGASHIN, I.A.
COUNTRY OF INFO—USSR
SOURCE—PATOLOGICHESKAYA FIZIOLOGIYA I EKSPERIMENTAL'NAYA TERAPIYA, 1970,
VOL 14, NR 3, PP 8-11
DATE PUBLISHED—70
SUBJECT AREAS—BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS—PANCREATITIS, TRANSFERASE, ENZYME ACTIVITY, NECROSIS,
DIAGNOSTIC MEDICINE
CONTROL MARKING—NO RESTRICTIONS
DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAE—3001/1923 STEP NO—UR/0396/70/014/003/0008/0011
CIRC ACCESSION NO—AP0127324
UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE—30OCT70

CIRC ACCESSION NO—AP0127324

ABSTRACT/EXTRACT—(U) GP-0- ABSTRACT. THIS WORK WAS DONE ON DOGS WITH HEMORRHAGIC PANCREONECROSIS CAUSED BY THE ADMINISTRATION OF BILE INTO THE PANCREATIC DUCT. TRANSAMIDINASE (AMIDINOTRANSFERASE) ACTIVITY WAS REVEALED IN THE BLOOD OF THESE DOGS 6 TO 12 HOURS AFTER THE BEGINNING OF PANCREONECROSIS. IN CASE OF PANCREATITIS CAUSED BY THE ADMINISTRATION OF SODIUM TAUROCHOLATE WITH TRYPSIN INTO THE PANCREATIC DUCT, PANCREONECROSIS OCCURRED COMPARATIVELY LATE AND TRANSAMIDINASE WAS REVEALED IN THE BLOOD 18 HOURS AFTER THE ONSET OF THE AFFECTION. FACILITY: KAFEDRA BIOKHIMII I MOSKOVSKOGO MEDITSINSKOGO INSTITUT. FACILITY: IM. I. M. SECHENOVA I LABORATORIYA ENZIMOLOGII INSTITUTA BIOMEDKHIMII AMN SSR, MOSKVA.

UNCLASSIFIED

USSR

KARELSKAYA, A.

"Transplantation Sickness and Gangleron"

Moscow, Nauka i Zhizn', No 9, Sep 70, pp 34-35

Abstract: Prevention of the development of the secondary radiation sickness known as transplantation sickness has been studied at the Scientific Research Institute of Hematology and Blood Transfusion imeni R. O. Yeolyan, Ministry of Health Armenian SSR. Dogs, rabbits, and rats were used in the experiments. The animals were irradiated and then received 3-4 bone marrow transplants. The animals readily withstood the operation, and their general condition, appetite, and blood picture rapidly returned to normal. Rejection and incompatibility soon developed, however. Tests with dimedrol and novocaine to suppress immunity met with little success. Gangleron, a ganglion and central nervous system blocking preparation synthesized at the Institute of Fine Organic Chemistry, Academy of Sciences Armenian SSR by Academician A. A. Mndzhoyan, was applied. Gangleron prevents the development of spasms in the smooth muscles and dilates the blood vessels which carry blood to the heart. The best results were obtained by administration 1/2

USSR

KARELSKAYA, A., Nauka i Zhizn', No 9, Sep 70, pp 34-35

of ganglioneuroma in doses of 2 mg/kg body weight in combination with prednisolone for periods of 3-4 weeks. In preparing for the transplant, both donor and recipient were given the combination of drugs, in order to deprive their tissues of that aggressiveness which is the cause of the development of antibodies. Such methods of preparing for the operation produced a survival rate of 96%. The search for additional methods of preventing the development of transplantation sickness is continuing.

2/2

- 24 -

USSR

KAREL'SKAYA, L.

"Winter Swimming - A Medical Problem"

Moscow, Nauka i Zhizn', No 3, pp 122-123

Abstract: Winter swimming in icy waters has recently become a widespread "movement" in the USSR, as a means of physical conditioning. Estimates are that 30,000 persons are now engaged in it, including, for example, more than 600 workers at the Cherepovets Metallurgical Combine. The trade union All-Union Council of Voluntary Sport Societies recently formed a special commission on this subject, and the bulk of this article is comments by Professor Serafim Petrovich Letunov, chairman of the commission, on the health aspects of this activity. He refers to tests by Moscow scientists that showed no changes in the cardiovascular systems of winter swimmers, and a study of eight persons with hypertension in Yalta, where four showed decreased pressure after swimming, two showed no change, and two had increased pressure. Studies of the reaction of the adrenal cortex to irritation by cold were conducted in Saratov. A hormone restructuring took place and the swimmers developed greater resistance to external influences, especially during the first two years of swimming. Gland activity was stable, but on a higher level than for

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USSR

KAREL'SKAYA, L., Nauka i Zhizn', No 3, 71, pp 122-123

non-swimmers. Several tests, the doctor said, indicated that winter swimmers suffer fewer colds and flu, and recover more easily. The one danger that is now known concerns the nervous system. While 25 kilocalories is an acceptable load, 50-60 lowers the person's work capacity, and 85 kilocalories can destroy it entirely. The doses of cold must be limited, it is concluded. As a final note, it is stated that psychologists, sociologists, and biologists are now studying this sport phenomenon.

2/2

- 94 -

Acc. Nr:

AP0049842

Abstracting Service:
CHEMICAL ABST. 5-7C

K

Ref. Code:

UR 0080

101339j Porous structure of nonactivated carbon adsorbents from industrial types of phenol-formaldehyde resins. Plachenov, T. G.; Sevrugov, L. B.; Pulerevich, M. Ya.; Karel'skaya, V. E. (Leningrad. Tekhnol. Inst. im. Lensovet, Leningrad, USSR). *Zh. Prikl. Khim. (Leningrad)* 1970, 43(1), 97-101 (Russ). Carbonization of a resol-type phenol-HCHO resin and a phenol-PhNH₂-HCHO resin at 400-1000° under N gave C adsorbents having extremely low pore vols. and radii in the range 2.9-280,000 Å. The adsorbents allowed C₆H₆ mols. to pass, but not MeOH mols. A considerable expansion of the pore structure in the range of 2.9-280,000 Å was obsd. when the PhOH-HCHO mole ratio was reduced to 0.85 : 1.

CKJR J me

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USSR

UDC 616.832-007.235-057.9

KAREPOV, G. V. and KAREPOVA, I. D., Kirovskaya Oblast Station of Labor Hygiene and Occupational Diseases

"A Case of Syringomyelia Whose Clinical Manifestations Were Job-Related"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 7, 1971, pp 54-55

Abstract: A detailed case history of a man 40 years old who had worked on an electrolyzer in an aluminum plant is given. The job entailed considerable physical exertion and exposure to high temperatures, vibration, fluoride compounds, and carbon monoxide. The course of the disease was marked by severe motor disturbances, muscular atrophy, and degenerative changes in the bones and joints. The disease progressed as a result of repeated micro-hemorrhages in the spinal cord. Hematomyelia was provoked by extreme physical exertion, overheating, and possibly vibration. The diagnosis was syringomyelia, mixed motor and trophic form, mixed cervicothoracic and bulbar type.

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USSR

UDC 616.832-007.235-057.9

KAREPOV, G. V., and KAREPOVA, I. D., Kirovskaya Oblast Station of Labor Hygiene and Occupational Diseases

"A Case of Syringomyelia Whose Clinical Manifestations Were Job-Related"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 7, 1971, pp 54-55

Abstract: A detailed case history of a man 40 years old who had worked on an electrolyzer in an aluminum plant is given. The job entailed considerable physical exertion and exposure to high temperatures, vibration, fluoride compounds, and carbon monoxide. The course of the disease was marked by severe motor disturbances, muscular atrophy, and degenerative changes in the bones and joints. The disease progressed as a result of repeated micro-hemorrhages in the spinal cord. Hematomyelia was provoked by extreme physical exertion, overheating, and possibly vibration. The diagnosis was syringomyelia, mixed motor and trophic form, mixed cervicothoracic and bulbar type.

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- 74 -

1/2 019 UNCLASSIFIED
TITLE—DEVELOPMENT OF THERMIONIC CONVERTERS —U—
AUTHOR—(02)—DANILOV, YU.I., KARETNIKOV, D.V.
COUNTRY OF INFO—USSR, ITALY, WORLD WIDE
SOURCE—AT. ENERG. 1970, 28(1), 33-7
DATE PUBLISHED—70

PROCESSING DATE—13NOV70

K

SUBJECT AREAS—ELECTRONICS AND ELECTRICAL ENGR.
TOPIC TAGS—THERMIONIC ENERGY CONVERSION, ELECTRIC ENGINEERING CONFERENCE,
ELECTROMECHANIC CONVERTER

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FAME—1993/0620

STEP NO—UR/0089/70/028/001/0033/0037

CIRC ACCESSION NO—AP0113506

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE—13NOV70

CIRC ACCESSION NO--AP0113506

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW OF THE PAPERS PRESENTED
AT THE SECOND INTERNATIONAL CONFERENCE ON THERMIONIC CONVERTERS, STRESA,
ITALY, MAY 1968, AND OF THE ACTIVITY OF VARIOUS INTERNATIONAL GROUPS
IN THIS FIELD.

UNCLASSIFIED

1/2 041 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--ELECTRON DISTRIBUTION FUNCTION IN A KNUDSEN DISCHARGE PLASMA IN
ARGON -U-
AUTHOR--(G3)-BYRDIN, YU.A., BYRDINA, T.G., KARETNIKOV, D.V.
COUNTRY OF INFO--USSR
SOURCE--TEPLOFIZ. VYS. TEMP. 1970, 8(2), 246-51
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS, ENERGY CONVERSION (NON-PROPULSIVE)
TOPIC TAGS--ARGON, DISCHARGE PLASMA, THERMIONIC ENERGY CONVERSION,
ELECTRON DISTRIBUTION, ELECTRON BEAM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3005/1411 STEP NO--UR/0294/70/0C8/002/0246/0251
CIRC ACCESSION NO--AP0133363
UNCLASSIFIED

2/2 041

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0133363

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ELECTRON DISTRIBUTION FUNCTION IN A KNUDSEN ARC PLASMA IN AR WAS MEASURED BY THE METHOD OF DOUBLY DIFFERENTIATED PROBE CHARACTERISTICS OF A PLANE PARALLEL DIODE. THE CIRCUIT SCHEME FOR THE DOUBLE DIFFERENTIATION IS SHOWN. THIS METHOD ALSO ENABLES ONE TO DET. PLASMA PARAMETERS. AN EXCESS OF FAST ELECTRONS WAS FOUND IN THE PLASMA IN COMPARISON WITH THE MAXWELL DISTRIBUTION. THE PRESENCE OF ELECTRONS WITH HIGHER ENERGIES, EXCEEDING THE NEAR CATHODE BARRIER, CONFIRMS A STRONG INTERACTION BETWEEN THE ELECTRON BEAM AND PLASMA OSCILLATIONS. THIS MECHANISM MAY TAKE PLACE IN THERMIONIC ENERGY CONVERTERS OPERATED IN THE ARC MODE. FACILITY: INST. AT. ENERG. IM. KURCHATOVA, MOSCOW, USSR.

UNCLASSIFIED

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USSR

UDC 541.64:533.4

FEDOTOVA, O. YA., GOROKHOV, V. I., PARESISHVILI, O. I., ~~KARSTENIKOV, G. S.~~,
and KOLESNIKOV, G. S. (deceased), Moscow Chemical Technological Institute
Imeni D. I. Mendeleev

"Study of the Thermal Degradation and Thermal Oxidation of Phosphorus Con-
taining Polyimides"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 14, No 6, Jun 72, pp 1256-1266

Abstract: A study has been carried out on thermal and thermal-oxidative degradation of polyimides using the model reaction of the anhydride of di-(3,4-dicarboxyphenyl)-phenylphosphine oxide with various aromatic diamines. It has been shown that the thermal stability of phosphorus containing polyimides depends on the thermal stability of the imide cycle, whose stability in turn depends on the structure of the diamine. The low molecular weight products of thermal degradation consist of hydrogen, CO, CO₂, benzene, methane, ammonia, water, and traces of ethylene. Using EPR method, it was shown that in the solid products of thermal and thermal oxidation degradation the rate of the accumulation of paramagnetic centers depends on the structure of the diamine radical. Increasing concentrations of paramagnetic

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USSR

FEDOTOVA, O. YA., et al, Vysokomolekulyarnyye Soyedineniya, Vol 14, No 6,
Jun 72, pp 1256-1266

centers in the polymer lead to higher thermal degradations. Resistance to thermal oxidative degradation depends on the structure of diamine used in the synthesis of polyimides: introduction of compounds with polyconjugated systems results in a sharp increase in the oxidation rate of the polymer.

2/2

- 72 -

USSR

UDC 621.372.413

KRAVCHENKO, V. F., KARETNIKOV, S. N., and BOBRYSEV, V. D.

"Calculating Limit Resonators"

Radiotekhnika. Resp. mezhved. temat. nauch.-tekhn. sb. (Radio Engineering. Republic Interagency Thematic Scientific-Technical Collection of Articles), 1972, vyp.21, pp 107-113 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 B122)

Translation: A relationship is obtained which is not only suitable for calculating regularly-nonregular limit resonators, but which also reflects some regularities associated with variation in the geometry of a resonator. It is shown that the Q-factor of an H_{011} wave biconical resonator is more than two times greater than the Q-factor of a regular cylindrical resonator. It is noted that it is possible to achieve values of the loaded Q-factor which exceed $5 \cdot 10^4$ for a basic type of oscillation. Original article: four illustrations, two tables, and 13 bibliographic entries.

1/1

Waveguides

USSR

UDC: 621.372.822

KRAVCHENKO, V. F., ~~KARETNIKOV, S. N.~~, USTIMENKO, V. V., KAR-
MAKULOV, V. S.

"Experimental Investigation of Scattering and Transmission of
Electromagnetic Waves by Spherical Nonhomogeneities in a Rec-
tangular Waveguide"

Radiotekhnika. Resp. mezhved. temat. nauch.-tekhn. sb. (Radio
Engineering. Republic Thematic Interdepartmental Scientific
and Technical Collection), 1971, vyp. 17, pp 39-44 (from RZh-
-Radiotekhnika, No 3, Mar 72, Abstract No 3B110)

Translation: In connection with the proposed method of cal-
culation, which is used in solving internal problems of elec-
trostatics on scattering and transmission of electromagnetic
waves by a rectangular waveguide with nonhomogeneities of regu-
lar shape, experimental studies which showed the singularities
in measurement of the reflection factor were done. Ways are
indicated for using the discovered experimental effects in the
development of specific microwave devices. Six illustrations,
bibliography of six titles. Resumé.

1/1

1/2 022 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--THERMODYNAMIC FUNCTIONS OF SIX SUB2 YZ TYPE HALOSILANES -J-
AUTHOR--(05)-MASLOV, P.G., USVYATTSEVA, T.E., BOYKO, V.G., KARETNIKOVA,
N.I., YENGALYCHEV, YU.S.
COUNTRY OF INFO--USSR
SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 825
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--THERMODYNAMIC FUNCTION, SILANE, SILICON COMPOUND, GAS STATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAPE--1993/0276 STEP NO--UR/0076/70/044/003/0825/0825
CIRC ACCESSION NO--AP0113206
UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--02OCT70
CIRC ACCESSION NO--AP0113206
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FORMULAS ARE DERIVED FOR THE
CALCN. OF THERMODYNAMIC PROPERTIES OF 12 GASEOUS HALOSILANES SIX SUB2
YZ (X, Y, Z EQUAL F, Cl, BR, I) AS FUNCTION OF TEMP. AND PRESSURE. THEY
WERE OBTAINED BY THE METHOD REPORTED EARLIER (CA 64: 16715F). FORMULAS
ARE VALID FOR C SUBRHODEGREES AND ENTHALPY (H TAUDEGREES MINUS H
SUBODEGREES) AT 250-1000DEGREEK (ACCURACY 0.2-3PERCENT); AS WELL AS FOR
ENTROPY AT 250-1500-2000DEGREEK (ACCURACY 0.2-1.5DEGREES). VALUES OF
COEFFS. IN THESE FORMULAS, ARE GIVEN. FACILITY: LENINGRAD, SOS.
PEDAGOG. INST. IM. GERTSENA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--300CT70
TITLE--USE OF OLEFINS FOR PREPARING ALKYL SULFONATES -U-
AUTHOR--(05)-TYUTYUNNIKOV, B.N., KARETNIKOVA, V.S., BUKHSHTAB, Z.I.,
YUSHCHENKO, YE.P., GASYUK, L.V.
COUNTRY OF INFO--USSR
SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (2), 34-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, MATERIALS
TOPIC TAGS--ALKENE, BIODEGRADABLE DETERGENT, AMMONIUM COMPOUND,
SULFONATION, SULFITE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/0568 STEP NO--UR/0318/70/000/002/0034/0036
CIRC ACCESSION NO--AP0119486
UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119486

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NH SUB4 HSO SUB3 WAS ADDED TO HIGHER ALPHA OLEFINS IN THE PRESENCE OF OXIDIZERS TO PRODUCE BIODEGRADABLE SULFONATE DETERGENTS. AIR BUBBLING AND PEROXIDES WERE USED IN THE PRESENCE OF SALTS OF METALS WITH VARIABLE VALENCE. THE REACTANTS WERE HEATED IN CYLINDRICAL REACTORS TO 80DEGREES AND AIR BUBBLED THROUGH FOR 4 HR, THEN THE REACTION MIXT. WAS TRANSFERRED TO THE SETTLER AND COOLED TO 20-50DEGREES. AFTER 3-4 HR, A MINERAL SALT LAYER WAS SEPD. TO BOTTOM. THE UPPER HYDROCARBON LAYER WAS RECYCLED. THE MIDDLE LAYER, CONTG. AN ALC. AQ. SOLN. OF SULFONATES, WAS DILD. 1:1 WITH H SUB2 O AND THE REMAINING HYDROCARBONS WERE EXTG. WITH GASOLINE. THE SULFONATES WERE CONCD. BY DISTG. OFF ALCS. AND H SUB2 O TO OBTAIN AN NH SUB4 ALKYL SULFONATE CONC. CONTG. 45-53PERCENT ACTIVE SUBSTANCE. DATA ON THE PROCESS ARE PRESENTED. FACILITY: KHARKOV, POLITEKH. INST. IM. LENINA, KHARKOV, USSR.

UNCLASSIFIED

USSR

UDC: 621.314.2

STEPANOV, V. D., KARETNIKOVA, Ye. I.

"A High-Voltage Piezoceramic Transformer"

USSR Author's Certificate No 277880, filed 16 Dec 68, published 6 Nov 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V427 P)

Translation: The proposed high-voltage piezoceramic transformer contains input and output sections equipped with electrodes which are located on the opposite sides of piezoceramic plates. As a distinguishing feature of the patent, the transformation ratio is increased and the resonance frequency is raised by making the input section in the form of a stack consisting of the main piezoceramic plate and additional plates fastened to it. The electrodes of a feedback section are placed along with the output section on the two sides of the continuation of the main plate. The input section and feedback section are polarized counter to each other, and the output section consists of two counter polarized segments and is equipped with an end electrode.

1/1

USSR

UDC 632.954

KARETSKAYA, N. A., Krasnodarsk Vegetable-Potato Plant Breeding Station

"The use of Treflan Against Weeds on Seedling and Seed Tomato Cultures in Krasnodarsk Territory"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 9, No 4 (90), 1971, pp 28-29

Abstract: The use of 1-4 kg/ha of treflan on the seed and seedling tomato cultures planted on Caucasus soil resulted in 90-95% destruction of prickly grass, foxtail, common amaranth and other annual weeds. The action of this herbicide lasted throughout the entire vegetative period. For higher effectiveness the preparation had to be mixed thoroughly with the upper soil layer -- 0-10 cm deep -- by means of a cultivator. Tomato seedlings were not affected by treflan, even a 2-4 kg/ha dose showing no detrimental effect on the vegetable. When tomato seeds were planted, treflan could not be used in 1-4 kg/ha amounts, as it lowered the yield of the vegetable considerably.

1/1

USSR

UDC: 8.74

KAREV, G. P.

"On the Probabilities of Degeneration in Certain Models of Populations"

V sb. Probl. kibernetiki (Problems of Cybernetics--collection of works),
vyp. 25, Moscow, "Nauka", 1972, pp 55-61 (from RZh-Kibernetika, No 6, Jun
72, Abstract No 6V592)

Translation: The paper refines a known method of finding probabilities of
degeneration in the case of generalized branching processes. Models of the
generalized branching process type do not require independence of multi-
plication of particles, and one of the theorems shows that the qualitative
nature of the statement of probabilities of degeneration of the Galton-
-Watson process is conserved in this considerably more general situation
as well. Author's abstract.

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K
USSR

UDC 615.277.3.038

KAREV, N. I., LICHINITSER, M. R. et al., Institute of Experimental and Clinical
Oncology, Academy of Medical Sciences USSR

"Results of Clinical Trials of Asaphan"

Moscow, Voprosy Onkologii, No 5, 1970, pp 41-45

Abstract: Asaphan is a sarcolysin (DL-phenylalanine mustard) derivative with antineoplastic activity in a number of experimental tumors. It was administered (1967-1969) to 184 patients with advanced forms of cancer (ovarian, breast, liver, stomach, kidney, and some others) in 17 hospitals and clinics. Asaphan was mildly effective in the treatment of only ovarian and breast cancer. Its low selectivity of action, severe depression of hematopoiesis, frequency of other side effects, and difficulty in determining optimum doses make the drug undesirable for clinical use.

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USSR

KAREV, P. B., LAVINSKIY, G. V., TOMASHPOL'SKIY, Yu. V.

"Determination of Probability of Detection of an Object with Two-Stage Search"

Teoriya Optimal'n. Resheniy [The Theory of Optimal Decisions -- Collection of Works], Kiev, 1972, pp 127-130 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V300 by the authors).

Translation: One typical problem in search systems is two-stage search for objects in a region. One variety of this problem is presearch, when the observer is already located in the area of possible positions of the target and goes over to the use of detection methods assuring more precise determination of the location of the target than in the preceding stage of search. One of the basic indicators of effectiveness of solution of this problem is the probability of detection of an object, which depends on the accuracy of determination of the location of the target during the search stage and the characteristics of the detection apparatus used in presearch. An expression is produced for this probability in one natural case.

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USSR

UDC 535.376

BORODIN, YU.P., BORONIN, V.G., KARSY, YU.A., KRUGLOV, I.I., MIKHAYLOV, L.I.,
PAVLOVA, V.A., PETROV, V.S., RYZHIKOV, I.V.

"Study Of The Region Of Radiative Recombination In Electroluminescent
Structures Based On Diffusion And Epitaxial Specimens Of Gallium Arsenide"

V sb. Elektroluminestsentsiya tverd. tel. (Electroluminescence Of Solid Bodies--
Collection Of Works), Kiev, "Nauk.dumka," 1971, pp 54-58 (from RZh--Elektronika
i yeye primeneniye, No 11, Nov 1971, Abstract No 118363)

Translation: A comprehensive study is presented of the electrical and optical
properties of the region of radiation recombination in diffused and epitaxial
specimens. The distribution is obtained of the impurity in the p-region of
diffused and epitaxial specimens by means of a measurement of the photolumin-
escent spectra. The experimentally determined transition time is: up to 1000
nanosecond with epitaxial specimens and 50 nanosec with diffused. The external
quantum efficiency at $T = 300^{\circ} \text{K}$ of the diffused and epitaxial specimens equals
one percent and five percent, respectively, and for a construction with the
maximum possible external quantum efficiency ~ 9 percent. 6 ill. 5 ref. Summary.

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USSR

UDC 669.715'5'721:620.193.4

KAREVA, A. P., KLEPTSOVA, I. S., LYUTOVA, I. S., RYAZHISKAYA, T. K.

"Study of the Relation between the State of the Alloy of the Al-Zn-Mg System, Its Electrochemical Potential, and the Corrosion Resistance of the Intermediate Products"

V sb. Metallovedeniye (Physical Metallurgy -- collection of works) Sudostroyeniye Press, 1971, pp 133-136 (from RZh-Metallurgiya, No 4, Apr 72, Abstract No 41679)

Translation: A study was made of the results of comparative studies of the electrochemical potentials of the alloy of the Al-Zn-Mg system in different states. The dependence of the potential on the heating temperature for quenching, annealing, and welding was established. The results of studying the variation of the electrochemical potential during the process of aging the alloys are confirmed by corrosion testing at the laboratory and under natural conditions. Recommendations are made with respect to selecting the heat treatment conditions of the alloy for which corrosion decreases in the weld-affected zone. Two illustrations.

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USSR UDC 669.715.018.29.1[539.4+539.214]539.374

SMIRNOV, M. A., KAREVA, N. T., AGOSHKIN, N. G., and TOLSTOV, A. M.

"Investigation of the Relation of the Hardening of Aluminum Alloy D16 to Temperature of Plastic Deformation During Thermomechanical Treatments"

V. sb. Materialy XXIII Nauch. - Tekhn. konferentsii Chelyabinsk. politekhn. in-ta. Sekts. Metallurg. Fak. Chelyabinsk (23rd Scientific-technological Materials Conference of Chelyabinsk Polytechnical Institute, Metallurgical Practice Section Chelyabinsk -- Collection of Works), 1970, p 74 (from Referativnyy Zhurnal -- Metallurgiya, No 6, Jun 71, Abstract No 6I631 by V. Bochkareva)

Translation of Abstract: Deformation is realized by rolling in the interval of 20-500°. The greatest increase in the stability properties is provided when the plastic deformation occurs at 150° and lower. The best combination of stability and plasticity is achieved by combining plastic deformation at 150° with 12-15% shrinkage with subsequent age hardening.

1/1

1/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--RADIOPROTECTIVE ACTION OF SOME ANTIOXIDANTS OBTAINED FROM PETROLEUM
PRODUCTS -U-
AUTHOR-(04)-KAREYEV, A.I., GASANOV, G.I., MEKHTIYEVA, S.M., SHAKHGELDIYEV,
M.
COUNTRY OF INFO--USSR
SOURCE--BIOL. NAUKI 1970, (5), 47-55
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--RADIOPROTECTIVE ACTION, GASOLINE ANTIOXIDANT, PETROLEUM
PRODUCT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--3009/0190

STEP NO--UR/0325/70/000/005/0047/0055

CIRC ACCESSION NO--AP0139053

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0139053

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OF 5 AROMATIC QUATERNARY AMMONIUM SALTS TESTED, ONLY N,N,DIMETHYL,N, PROPYL,(2, HYDROXY,5,BUTYL)BENZYLAMINE WAS APPRECIABLY RADIOPROTECTIVE, AS INDICATED BY ITS EFFECT ON THE OXIDN.-REDN. POTENTIAL OF THE TIBIAL TRICIPITAL MUSCLE OF IRRADIATED RATS, THE RATE OF BETA-CAROTENE OR OLEIC ACID OXIDN. IN VITRO, AND ON THE SURVIVAL RATE OF IRRADIATED RATS. OF 8 PHENOL DERIVS. TESTED, ONLY O,TERT,BUTYL,P,METHOXYPHENOL OR A MIXT. OF THIS AND M,TERT,BUTYL,P,METHOXYPHENOL WERE RADIOPROTECTIVE BY THESE CRITERIA.

FACILITY: INST. FIZIOL., BAKU, USSR.

UNCLASSIFIED